

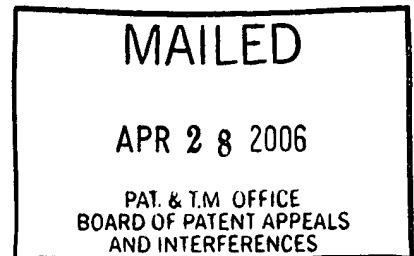
UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte Douglas P. Brown and Paul L. Sinclair

Appeal No. 2006-0179
Application No. 09/608,976

ON BRIEF



Before BARRY, BLANKENSHIP, and MacDONALD, *Administrative Patent Judges*.
BARRY, *Administrative Patent Judge*.

A patent examiner rejected claims 1-27 and 29-41. The appellants appeal therefrom under 35 U.S.C. § 134(a). We affirm-in-part.

I. BACKGROUND

The invention at issue on appeal concerns displaying query execution plans. In a database management system ("DBMS"), users querying a database need not specify how to access desired data, but only what data are desired. Given a query, an optimizer of the DBMS generates alternative plans for accessing the requested data. After estimating the execution cost of each alternative, it selects the optimum execution plan. (Spec. at 1.)

Furthermore, DBMSs allow a user to view the execution plan for a given query. Some systems present the plan in a textual format, which may suffice for simple, straight-forward execution plans. As the complexity of execution plans grow, however, the appellants have need of a more sophisticated display thereof. (*Id.*)

Accordingly, the appellants' invention determines steps of a query execution plan in a parallel database system and displays the steps via a graphical user interface ("GUI"). Parallel execution of steps of the query execution plan is depicted in the GUI. (*Id.* at 2.) Furthermore, plural execution plans for a query executed under different conditions may be displayed for comparison. (*Id.* at 24.)

A further understanding of the invention can be achieved by reading the following claims.

1. A method of presenting an execution plan for a query, comprising:
 - determining steps of the query execution plan for a parallel database system;
 - displaying the steps of the query execution plan in a graphical user interface; and
 - depicting parallel execution of steps of the query execution plan in the graphical user interface,

wherein depicting the parallel execution of steps comprises displaying plural elements corresponding to concurrently executing plural steps on respective processors of the parallel database system.

3. The method of claim 1, wherein determining the steps comprises determining steps of the query execution plan for the parallel database system running in a platform having plural virtual processors to handle access to data in the parallel database system.

35.¹ The method of claim 1, wherein displaying the plural elements comprises displaying the plural elements side-by-side to indicate concurrent execution of the respective steps.

11. A method of testing performance of a query, comprising:

determining a first execution plan of the query under a first condition;

determining a second execution plan of the query under a second condition; and

displaying the first and second execution plans concurrently to enable comparison of the execution plans.

23. A system comprising:

a graphical user interface; and

a controller to determine an execution plan of a query based on emulation data that emulates an environment of a target system in which a parallel database system is implemented,

¹Because it depends from claim 1, we present claim 35 nearer claim 1 that it would be if it was listed in strict numerical order.

the controller to display a representation of the execution plan in the graphical user interface.

Claims 1-6, 9-22, 30, 31, and 34-41 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,857,180 ("Hallmark") and U.S. Patent No. 6,434,545 ("MacLeod"). Claims 7, 8, 32, and 33 stand rejected under § 103(a) as obvious over Hallmark; MacLeod; and U.S. Patent No. 6,289,334 ("Reiner"). Claim 23 stands rejected under § 103(a) as obvious over MacLeod and Reiner. Claims 24-27 and 29 stand rejected under § 103(a) as obvious over MacLeod; Reiner; and U.S. Patent No. 6,067,542 ("Cariño").

II. OPINION

Our opinion addresses the claims in the following order:

- claims 1, 2, 4-6, 9, 10, 30, and 31
- claims 35, 36, 40, and 41
- claim 3
- claims 11-22, 34, and 37-39
- claims 7, 8, 23-27, 29, 32, and 33.

A. CLAIMS 1, 2, 4-6, 9, 10, 30, AND 31

"[T]o assure separate review by the Board of individual claims within each group of claims subject to a common ground of rejection, an appellant's brief to the Board must contain a clear statement for each rejection: (a) asserting that the patentability of claims within the group of claims subject to this rejection do not stand or fall together, and (b) identifying which individual claim or claims within the group are separately patentable and the reasons why the examiner's rejection should not be sustained."

In re McDaniel, 293 F.3d 1379, 1383, 63 USPQ2d 1462, 1465 (Fed. Cir. 2002) (citing 37 C.F.R. §1.192(c)(7)). "If the brief fails to meet either requirement, the Board is free to select a single claim from each group of claims subject to a common ground of rejection as representative of all claims in that group and to decide the appeal of that rejection based solely on the selected representative claim." *Id.*

Here, the appellants stipulate that claims 1, 2, 4-6, 9, 10, 30, and 31 "stand and all [sic] together," (Appeal Br. at 4), i.e., as a group. We select claim 1 from the group as representative of the claims therein. With this representation in mind, rather than reiterate the positions of the examiner or the appellants *in toto*, we focus on the point of contention therebetween.

The examiner finds, "Hallmark specifically discloses determining steps of the query execution plan in a parallel database system . . . see Abstract, lines 1-19; col. 8, lines 64 to col. 9, lines 4. . . ." (Examiner's Answer at 18.) She further finds, "one of ordinary skill in the art at the time invention was made, would . . . incorporate an interface as taught by MacLeod for displaying and depicting the claimed query execution plan in Hallmark's system," (*id.*), "to provide a user with a GUI of multiple query execution plans, such that the user can select, compare and optimize a query in the massively parallel execution system." (*Id.*)

The appellants argue that "this statement fails to provide any rationale regarding why any person of ordinary skill in the art would have been motivated to modify the GUI of MacLeod to display and depict parallel execution of steps of a query execution plan for a parallel database system." (Appeal Br. at 7.) They further argue, "depicting the tree structure 210 [in MacLeod] is not the same as depicting *parallel* execution of steps of the query execution plan in the graphical user interface." (Reply Br. at 3.)

"In addressing the point of contention, the Board conducts a two-step analysis. First, we construe the representative claim to determine its scope. Second, we determine whether the construed claim would have been obvious." *Ex Parte Massingill*, No. 2003-0506, 2004 WL 1646421, at *2 (Bd.Pat.App & Int. 2004).

1. Claim Construction

"Analysis begins with a key legal question — *what is the invention claimed?*"

Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1567, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987). In answering the question, "the PTO gives claims their 'broadest reasonable interpretation.'" *In re Bigio*, 381 F.3d 1320, 1324, 72 USPQ2d 1209, 1211 (Fed. Cir. 2004) (quoting *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1668 (Fed. Cir. 2000)). "Moreover, limitations are not to be read into the claims from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184, 26 USPQ2d 1057, 1059 (Fed. Cir. 1993) (citing *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)).

Here, claim 1 recites in pertinent part the following limitations: "depicting parallel execution of steps of the query execution plan in the graphical user interface, wherein depicting the parallel execution of steps comprises displaying plural elements corresponding to concurrently executing plural steps on respective processors of the parallel database system." Giving the representative claim its broadest, reasonable construction, the limitations require using a GUI to depict parallel steps of a query execution plan.

2. Obviousness Determination

"Having determined what subject matter is being claimed, the next inquiry is whether the subject matter would have been obvious." *Massingill*, at *3. "A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). Such a case of obviousness is "based on underlying factual determinations including . . . what th[e] prior art teaches explicitly and inherently. . . ." *In re Zurko*, 258 F.3d 1379, 1383, 59 USPQ2d 1693, 1696 (Fed. Cir. 2001) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966); *In re Dembiczak*, 175 F.3d 994, 998, 50 USPQ 1614, 1616 (Fed. Cir. 1999); *In re Napier*, 55 F.3d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995)).

Similarly, "[t]he presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact." *In re Gartside*, 203 F.3d 1305, 1316, 53 USPQ2d 1769, 1776 (Fed. Cir. 2000) (citing *In re Dembiczak*, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)). Such a motivation "may be found in explicit or implicit teachings within . . . references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved."

WMS Gaming Inc. v. Int'l Game Tech., 184 F.3d 1339, 1355, 51 USPQ2d 1385, 1397 (Fed. Cir. 1999) (citing *In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998)).

Here, the appellants admit, "Hallmark describes implementing parallel processing in a database management system. . . ." (Appeal Br. at 6.) More specifically, the reference explains that its "parallelism . . . provides the ability to divide an execution plan among one or more processes, or query slaves. Parallel query execution provides the ability to execute a query in a series of parallel steps, and to access data in parallel." Col. 8, l. 64 - col. 9, l. 1.

For its part, MacLeod "display[s] an intuitive, graphical representation of query execution, including detailed computational cost statistics." Col. 1, ll. 8-10. Figures 5-9 of the latter reference show that the graphical representation is displayed via a GUI. MacLeod explains that its "graphical display . . . is designed to pictorially convey a maximum of information relating to query execution. In particular, each query is represented by a tree and each query operation belonging to a query is represented by a corresponding tree node." Col. 2, ll. 2-6. The reference describes several "benefits and advantages," *id.* at l. 56, of its GUI-based query analyzer. Using the GUI, "a developer can almost immediately narrow the search for the cause of performance

problems." *Id.* at ll. 18-20. Because the GUI "may be enabled during normal application execution," *id.* at ll. 34-35, "a developer is more likely to trouble-shoot the cause of a problem which manifests itself during such normal application use." *Id.* at ll. 35-37. "[E]ven where the developer fails to locate the source of a performance problem, the query analyzer of the present invention may facilitate semi-automatic enhancement of query performance." *Id.* at ll. 52-55.

We find that the aforementioned benefits and advantages offered by MacLeod's GUI-based query analyzer would have motivated a person of ordinary skill in the art to use such an analyzer to analyze, trouble-shoot, or enhance the execution plans taught by Hallmark. Because the latter plans execute a query in parallel steps, we find that the combined teachings of Hallmark and MacLeod would have suggested using a GUI to depict parallel steps of a query execution plan. Therefore, we affirm the rejection of claim 1 and of claims 2, 4-6, 9, 10, 30, and 31, which fall therewith.

B. CLAIMS 35, 36, 40, AND 41

The appellants stipulate that claims 35, 36, 40, and 41 stand or fall as a group. (Appeal Br. at 4.) We select claim 35 from the group as representative of the claims therein.

The examiner finds, "when the GUI of MacLeod is combined with the parallel query processing system of Hallmark, the expected result would have been side-by-side parallel displays of the query plan with executions done by Hallmark." (Examiner's Answer at 20.) The appellants argue, "None of the Figures of MacLeod, nor the accompanying text, indicates or even remotely suggests that plural elements corresponding to concurrently executing plural steps on respective processors of a parallel database system are displayed side-by-side to indicate concurrent execution of the respective steps." (Appeal Br. at 8.)

1. Claim Construction

Here, claim 35 recites in pertinent part the following limitations: "displaying the plural elements comprises displaying the plural elements side-by-side to indicate concurrent execution of the respective steps." Giving the representative claim its broadest, reasonable construction, the limitations require displaying the parallel steps of the aforementioned execution plan side-by-side via the aforementioned GUI.

2. Obviousness Determination

"Non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references."

In re Merck, 800 F.2d, 1091, 1097, 231 USPQ 375, 380 (Fed. Cir. 1986) (citing *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)). "Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1025, 226 USPQ 881, 886-87 (Fed. Cir. 1985) (quoting *Keller*, 642 F.2d at 425, 208 USPQ at 881).

Here, as explained regarding claims 1, 2, 4-6, 9, 10, 30, and 31, we have found that the combined teachings of Hallmark and MacLeod would have suggested using a GUI to depict parallel steps of a query execution plan. Because the parallel steps are executed concurrently, see Hallmark, col. 6, ll. 38-39, we now find that displaying the steps side-by-side would have allowed a user to readily distinguish these steps from "non-parallelized" steps, col. 8, ll. 57-58, i.e., steps that are executed serially rather than concurrently. Further finding that one of ordinary skill in the art would have displayed the parallel steps side-by-side via the GUI, we affirm the rejection of claim 35 and of claims 36, 40, and 41, which fall therewith.

C. CLAIM 3

"[T]he Examiner points out that the cited col. 7, lines 1-19 of Hallmark specifically discloses that the determining steps of the claimed query execution plan is performed by the Database Management System (DBMS) wherein the DBMS including the partitioning processor (or the parser) for parsing the query execution plan are implemented via software, therefore, the various processors of a DBMS including the partitioning parser are virtual processors." (Examiner's Answer at 19.) The appellants argue, "The cited passage does not refer whatsoever to determining steps of a query execution plan for a parallel database system having *plural virtual processors*." (Appeal Br. at 8.)

1. Claim Construction

Claim 3 recites in pertinent part the following limitations: "determining steps of the query execution plan for the parallel database system running in a platform having plural virtual processors to handle access to data in the parallel database system." Among other things, the limitations require a parallel database system that includes virtual processors.

2. Obviousness Determination

"In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness." *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993) (citing *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)). Here, the passage of Hallmark cited by the examiner follows.

Existing parallel query systems are implemented in a shared nothing environment. FIG. 1B illustrates a shared nothing hardware architecture. In a shared nothing environment, each computer system is comprised of its own resources (e.g., memory, central processing unit, and disk storage). That is, a shared nothing environment is comprised of one or more autonomous computer systems, and each system processes its own data. For example, system one in FIG. 1B is comprised of a central processing unit (i.e., CPU 1), memory (i.e., memory 1), and disk storage (i.e., disk storage 1). Similarly, system n contains similar resources.

A DBMS implemented in a shared nothing environment has an automatic partitioning scheme based on the physical location of data. Therefore, partitioning, in a shared nothing environment, is determined at the time the physical layout of data is determined (i.e., at the creation of a database). Thus, any partitioning in a shared nothing environment is static.

Col. 7, ll. 1-19. Although the passage discloses plural computer systems, each with its own central processing unit ("CPU"), we are unpersuaded that these CPUs are virtual processors. To the contrary, we interpret the CPUs as actual, physical processors. That the CPUs may execute software, in our opinion, does not make them virtual processors.

The examiner does not allege, let alone show, that the addition of MacLeod cures the aforementioned deficiency of Hallmark. Absent a teaching or suggestion of a parallel database system that includes virtual processors, we are unpersuaded of a *prima facie* case of obviousness. Therefore, we reverse the rejection of claim 3.

D. CLAIMS 11-22, 34, AND 37-39

The examiner alleges, "Hallmark/MacLeod disclose . . . display the step of the second execution plan concurrently with the steps of the first execution plan in the graphical user interface (Fig. 5 and Fig. 6 and corresponding text, MacLeod)." (Examiner's Answer at 11.) The appellants argue, "Neither Figure 5 nor Figure 6 teaches or even remotely suggests displaying steps of a second execution plan for a query concurrently with steps of the first execution plan for the same query. . . ." (Appeal Br. at 8-9.)

1. Claim Construction

"The Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art." *In re Lowry*, 32 F.3d 1579, 1582, 32 USPQ2d 1031, 1034 (Fed. Cir. 1994) (citing *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 403-04 (Fed. Cir. 1983)). Here, claim 11 recites in pertinent part the following limitations: "testing performance of a query, comprising:

determining a first execution plan of **the** query under a first condition; determining a second execution plan of **the** query under a second condition; and displaying the first and second execution plans concurrently. . . ." (Emphases added.) Claim 34 recites similar limitations. Considering all these claim limitations, claims 11 and 34 require concurrently displaying the steps of two execution plans, wherein the plans are both for executing the same query.

2. Obviousness Determination

Turning to the parts of MacLeod cited by the examiner, although the GUI shown in Figure 5 of the reference concurrently displays the steps of two execution plans, the plans are not for executing the same query. To the contrary, the plans are for executing "two [**different**] specified queries. . . ." Col. 3, l. 10. Although the GUI shown in Figure 6 of MacLeod represent only "one specified query with multiple operations," *id.* at l. 13, the latter GUI shows only a **single** execution plan for the query.

The examiner does not allege, let alone show, that the addition of Hallmark cures the aforementioned deficiency of MacLeod. Absent a teaching or suggestion of concurrently displaying the steps of two execution plans, wherein the plans are both for executing the same query, we are unpersuaded of a *prima facie* case of obviousness.

Therefore, we reverse the rejection of claim 11; of claims 12-22 and 37-39, which depend from claim 11; and of claim 34.

E. CLAIMS 7, 8, 23-27, 29, 32, AND 33

The examiner admits, "MacLeod fails to specifically teach this user program interface is based on emulation data that emulates a parallel processing database environment of a target system." (Examiner's Answer at 26.) Noting that "Reiner clearly discloses the claimed Parallel User Program Interface (PUPI) that emulates the calling sequence and behavior of the UPI routines of a system [e.g., col. 31; Lines 1-3]," (*id.*), and that "Reiner discloses the Parallel UPI will decomposing [sic] a query into a plurality of sub-queries for execution, creating and managing threads in which those sub-queries are executed concurrently, and combining the results to emulate the result of the original query," (*id.*), she makes the following assertion.

[W]ith the combined teachings of MacLeod and Reiner in front of him/her, an ordinary skill person in the art at the time the invention was made would definite have been motivated to modify the UPI of MacLeod with the emulation control technique taught by Reiner, such that the combined system will be imitated with the upscale parallel emulation control for

running on the other system environment as well without bothering to reinvent the wheel.

(*Id.* at 26-27.) The appellants argue, "There is no teaching whatsoever in Reiner of emulating an environment of a target system in which a parallel database system is implemented." (Appeal Br. at 12.)

1. Claim Construction

Claim 23 recites in pertinent part the following limitations: "a controller to determine an execution plan of a query based on emulation data that emulates an environment of a target system in which a parallel database system is implemented." Claims 7, 8, and 32 recite similar limitations. Among other things, the limitations require emulating an environment of a target system in which a parallel database system is implemented.

2. Obviousness Determination

Although the passage of Reiner cited by the examiner describes emulation, it "emulates the calling sequence and behavior of the [User Program Interface, i.e.,] UPI routines," col. 31, ll. 2-3, and also combines results from parallel subqueries "to emulate the result of [an] original query," *id.* at ll. 6-7, of an ORACLE DBMS. *See, e.g.,* col. 31, l. 16. For our part, we are uncertain which element of MacLeod the examiner interprets

as the "UPI of MacLeod." (Examiner's Answer at 26.) Furthermore, we are unpersuaded that the aforementioned description of Reiner along with the teachings of MacLeod would have suggested emulating an environment of a target system in which a parallel database system is implemented.

The examiner does not allege, let alone show, that the addition of Hallmark or Cariño cures the aforementioned deficiency of Reiner and MacLeod. Absent a teaching or suggestion of emulating an environment of a target system in which a parallel database system is implemented, we are unpersuaded of a *prima facie* case of obviousness. Therefore, we reverse the obviousness rejection of claims 7, 8, and 23; of claims 24-27 and 29, which depend from claim 23; of claim 32; and of claim 33, which depends from claim 32.

III. ADDITIONAL OBSERVATIONS

At the time of the appellants' brief, an appeal brief was required to include "[a] concise explanation of the invention defined in the claims involved in the appeal, which **shall refer** to the specification by page and line number, and **to the drawing . . . by reference characters.**" 37 C.F.R. § 1.192(c)(5)(2003) (emphases added).²

²We cite to the version of the C.F.R. in effect at the time of the appellants' brief. The current requirements for a summary of claimed subject matter are set forth in 37

Furthermore, "it [wa]s preferable to read the appealed claims on the specification and any drawing." M.P.E.P. § 1206 (8th ed. Aug. 2001).³

Here, although the *Summary of Invention* part of the appellants' brief refers generally to "Specification, p. 3, l. 27-p. 4, l. 5; p. 14, l. 20-p. 17, l. 16," (Appeal Br. at 3), in summarizing claim 23, the *Summary* fails to reference any of the appellants' twenty-two drawings, let alone any of the reference characters thereof. Nor does this part of the brief read the individual limitations of claim 23 (or of any other of the claims) on the specification or the drawings. Such a reading "is [always] considered important to enable the Board to more quickly determine where the claimed subject matter is described in the application." M.P.E.P. § 1205.02 (8th ed., rev. 3 Aug 2005).⁴

Absent the aforementioned guidance from the appellants, we were unable to read the individual limitations of claim 23 on the remainder of the appellants'

C.F.R. § 41.37(c)(1)(iv)(2005) and are more demanding than those of § 1.192(c)(5)(2003).

³We cite to the version of the M.P.E.P. in effect at the time of the appellants' brief. The current procedures for a summary of claimed subject matter are set forth in M.P.E.P. § 1205.02 (8th ed., rev. 3, Aug. 2005) and are more demanding than those of M.P.E.P. § 1206 (8th ed. Aug. 2001).

⁴The examiner's help in policing appeal briefs for compliance with § 1.192(c)(5) or § 41.37(c)(1)(iv) is requested.

specification or on their drawings. In particular, we were unable to ascertain whether the "environment of a target system in which a parallel database system is implemented" of claim 23 is described in the appellants' written description or depicted in their figures.

"[C]laims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 C.F.R. § 1.75(d)(1). Furthermore, "[t]he drawing[s] in a nonprovisional application must show every feature of the invention specified in the claims." *Id.* at § 1.83(a).

In an *ex parte* appeal, however, "the Board is basically a board of review — we review . . . rejections made by patent examiners." *Ex parte Gambogi*, 62 USPQ2d 1209, 1211 (Bd.Pat.App. & Int. 2001). Consequently, we leave the issue of whether the appellants have satisfied the requirements of §§ 1.75(d)(1) and 1.83(a) to the examiner and the appellants.

IV. CONCLUSION

In summary, the rejections are affirmed-in-part. More specifically, the rejection of claims 1, 2, 4-6, 9, 10, 30, 31, 35, 36, 40, and 41 under § 103(a) is affirmed. The rejections of claims 3, 7, 8, 11-27, 29, 32-34, and 37-39 under § 103(a), however, are reversed.

"Any arguments or authorities not included in the brief will be refused consideration by the Board of Patent Appeals and Interferences. . . ." 37 C.F.R. § 1.192(a). Accordingly, our aforementioned affirmance is based only on the arguments made in the briefs. Any arguments or authorities omitted therefrom are neither before us nor at issue but are considered waived. *Cf. In re Watts*, 354 F.3d 1362, 1367, 69 USPQ2d 1453, 1457 (Fed. Cir. 2004) ("[I]t is important that the applicant challenging a decision not be permitted to raise arguments on appeal that were not presented to the Board.")

No time for taking any action connected with this appeal may be extended under 37 C.F.R. § 1.136(a).

~~LANCE LEONARD BARRY~~
Administrative Patent Judge

BOARD OF PATENT
APPEALS
AND
INTERFERENCES

ALLEN R. MacDONALD
Administrative Patent Judge

Appeal No. 2006-0179
Application No. 09/608,976

Page 24

James M. Stover
NCR Corporation
1700 South Patterson BLVD. WHQ4
Dayton, OH 45479